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(54) Gemstone Setting

(57) A gemstone is set in metal by providing a bore through a metal setting in which bore the gemstone is seated, and a flange at the front of the setting against which the rim of the stone rests. The stone is mounted in the setting from the rear and secured in position against the flange, for example, using a piece of metal having an outer dimension equal to or slightly greater than that of the bore, which piece of metal is soldered or force-fitted into the bore so that it engages the rear of the stone.

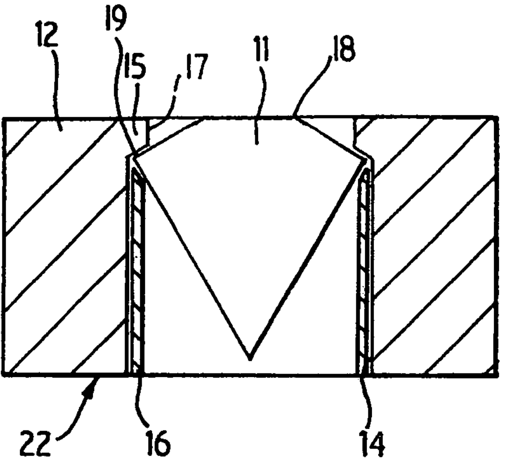

Fig.2.

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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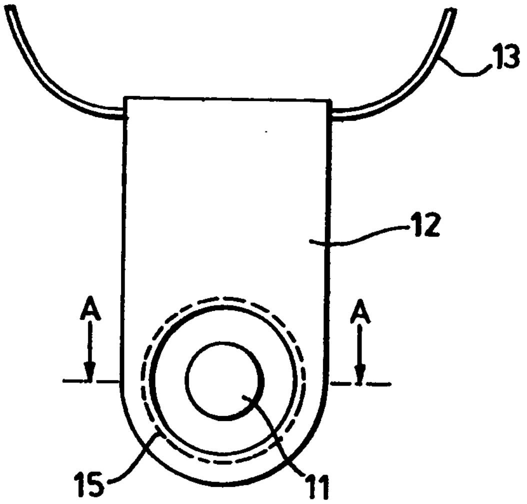

Fig.1.

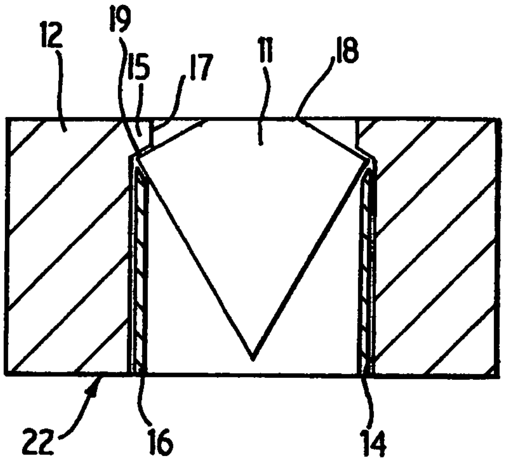

Fig.2.

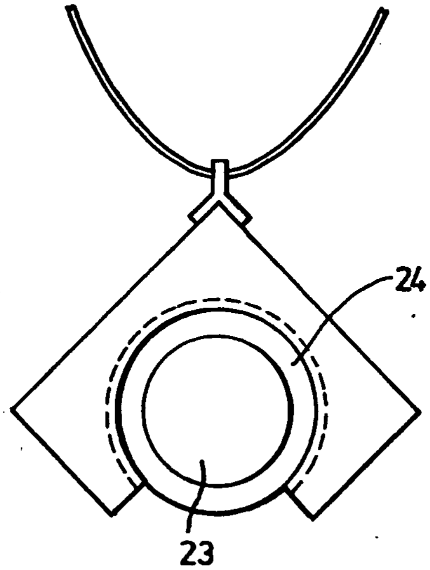

Fig.3.

SPECIFICATION
Gemstone Setting

The present invention relates to jewellery, and in particular to the setting of gemstones therefor.

In the past gemstones have been fitted into metal settings by mounting the stone from the front of the setting and securing the stone by means of claws overlapping the edge of the stone. Not only can the claws work loose and the stone fall out, but also the design of the jewellery has been limited by the necessity of providing claws. As an alternative the stone may be set from the front using a wrap-over tube setting.

According to the present invention there is provided a method of setting a gemstone in metal, wherein a metal setting is provided having a bore at the rear to accommodate the gemstone and a flange at the front of the setting to engage the rim of the stone, the method comprising the steps of mounting the gemstone in the setting from the rear until the front rim of the gemstone engages the flange, and securing the gemstone in position in the setting from the rear of the setting.

The metal setting may be formed by separate cutting, drilling and boring operations, or all at once, for example by a casting operation.

In a preferred embodiment the gemstone is secured from the rear using a piece of metal having an outer dimension equal to or slightly greater than that of the said bore, the piece of metal being soldered or force-fitted into the bore so that it engages the rear of the stone. Enough of the bore must be left open to allow light through the stone.

The flange of the metal setting should engage the stone for sufficient width and length to hold the stone in position, but is preferably not wider than is necessary for this purpose so that the maximum possible surface area is visible from the front of the setting. The flange may engage the stone only at selected points as long as the stone is held thereby.

Advantageously the metal setting is very highly polished before the stone is mounted to achieve maximum reflection of the stone.

The invention also provides a piece of jewellery comprising a metal setting having a bore with an inwardly directed flange at the front end thereof, and a gemstone mounted in the bore with the flange engaging a sufficient part of the front rim thereof to hold the stone in the setting, and means disposed in the bore for securing the stone in the setting from the rear.

Advantageously the inner surface of the flange is angled to the angle of the gemstone to be set to reduce the stress on the stone.

In a preferred embodiment, where the flange and bore are circular the stone is secured from the rear by a cylinder or ring of the same metal as the setting, and having an outer diameter equal to or slightly greater than the bore diameter. The cylinder or ring may be fixed to the bore by soldering or by force-fitting.

The invention will now be described by way of example, with reference to the accompanying drawings, in which:—

Figure 1 is a front view of an embodiment of the invention,

Figure 2 is a cross-section along A—A of Figure 1, and

Figure 3 is a front view of a second embodiment of the invention.

In the drawings, Figures 1 and 2 illustrate a diamond 11 mounted in a gold setting 12 which can be strung on a chain 13 for use as a pendant. The diamond is set in a bore 14 with the whole of the rim of the front face of the diamond engaging a flange 15 at the front of the bore 14. The stone is held in position from the rear by a gold cylinder 16.

To make the pendant of Figures 1 and 2 metal for the setting 12 is first shaped as required. The metal is then drilled at 17 to a diameter which allows the major part of the face 18 of the diamond 11 to be seen from the front of the setting. The setting is counterbored from the rear to a diameter approximately equal to the diameter of the diamond 11, to form the bore 14. The front end of the bore 14 forms the flange 15, which is angled at 19 to an angle approximately equal to the face angle of the diamond. The metal is highly polished before the stone is mounted in the setting from the rear with the angled face of the stone engaging the flange 15. The high degree of polishing, and the minimal cover of the diamond by the setting produces a very beautiful piece of jewellery, the like of which is not possible by known setting methods.

When the stone is in position, a cylinder 16 of diameter approximately equal to that of the bore 14 is firmly fixed in the bore 14 behind the stone 11 to hold the stone securely in the setting. As the stone is a diamond, in this case, the cylinder 16 may be soldered to the metal 12 and the rear surface 22 of the setting polished to conceal the join. However this technique may not be possible with other gemstones which would be damaged by the heat. Therefore, as an alternative, the cylinder 16 can be made very slightly wider than the bore 14 and then force-fitted into the bore 15 without applying heat. By this method it is envisaged that stones other than diamonds will be able to be set in accordance with the present method.

The metal setting can be formed as one piece, for example by casting, with an angled flange and bore, instead of carrying out the separate drilling and boring operations. This enables stones not having a circular rim to be set with ease using the above method. The shape of the aperture (through which the stone is seen) and flange 15 can then be formed as required for any design.

Figure 3 is also a pendant diamond 23 in a gold setting, but in this embodiment the flange 24 only engages a part of the diamond rim. While the diamond 23 could be held in position from the rear by a curved piece of gold having the same length as the flange, it is preferable for the security of the diamond to use a cylinder as has been previously described.

It is envisaged that the setting may have a shape of front aperture different from that of the gemstone to be set, provided that the bore is of sufficient size to hold the stone, and provided the flange engages the front face rim of the stone for sufficient total length to hold the stone securely. The means for securing the stone from the rear could, in such a case take the form of a seating for the stone which would be fitted in the rear of the setting after the stone has been mounted, as has been previously described.

It will be appreciated that this method can be used to set gemstones in almost any piece of jewellery, for example, bracelets, rings, earrings and brooches.

Claims

1. A method of setting a gemstone in metal wherein a metal setting is provided with a through bore to accommodate the gemstone and a flange at the front of the setting against which the gemstone will be seated, the method comprising the steps of mounting the gemstone in the setting from the rear until the front rim of the gemstone is seated against the flange, and securing the gemstone in position in the setting from the rear of the setting.

2. A method according to claim 1 wherein the gemstone is secured in position from the rear using a piece of metal having an outer dimension substantially equal to that of the bore, the said piece of metal being soldered into the bore so that it engages the rear of the stone to hold it in position.

3. A method according to claim 1 wherein the gemstone is secured in position from the rear using a piece of metal having an outer dimension slightly greater than that of the said bore, the said piece of metal being force-fitted into the bore so that it engages the rear of the stone to hold it in position.

4. A method according to any of the preceding claims wherein the metal setting is highly polished before mounting the stone.

5. A method of setting a gemstone in metal substantially as herein described with reference to the accompanying drawings.

6. A piece of jewellery comprising a metal setting having a bore with an inwardly directed flange at the front end thereof, a gemstone mounted in the bore with the flange engaging a sufficient part of the front rim of the stone to hold the stone in the setting, and means disposed in the bore for securing the stone in the setting from the rear.

7. A piece of jewellery according to claim 6 wherein the inner surface of the said flange is angled to equal the angle of the set gemstone.

8. A piece of jewellery according to claim 6 or 7 wherein the bore is circular and the stone is secured from the rear by a cylinder or ring of the same material as the setting.

9. A piece of jewellery according to any of claims 6 to 8 wherein the flange extends the whole length of the front rim of the stone.

10. A piece of jewellery according to any of claims 6 to 8 wherein the flange engages the stone only at selected points.

11. A piece of jewellery according to any of claims 6 to 8 wherein the flange extends only part of the length of the rim of the stone.

12. A piece of jewellery according to any of claims 6 to 11 wherein the metal setting is gold and the gemstone is a diamond.

13. A piece of jewellery substantially as herein described with reference to Figures 1 and 2 of the accompanying drawings.

14. A piece of jewellery substantially as herein described with reference to Figure 3 of the accompanying drawings.

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